

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 8. This sheet, which includes Figs. 7-8, replaces the original sheet including Figs. 7-8.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-3 and 6-27 are presently active in this case. The present Amendment amends Claims 1-2 and 6-14; cancels Claims 4-5 and adds Claims 16-27.

The outstanding Office Action objected to the drawings because of informalities. Claims 1-8, 10, 14 and 15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hambling (U.S. Patent No. 2,949,731). Claims 1-4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Williams (U.S. Patent No. 5,899,085). Claims 1-4, 14 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hambling or Williams. Claims 5-7 were rejected under 35 U.S.C. § 103(a) as being obvious over Hambling or Williams and further in view of Wollenweber et al. (U.S. Patent No. 6,145,314).

Claims 8 and 10 were indicated as allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph and if rewritten in independent form. Applicant acknowledges with appreciation the indication of allowable subject matter. In response, features from Claim 8 are incorporated in new independent Claim 25. Other features from Claims 7 and 8 are included in new dependent Claims 26-27. Therefore, Claims 25-27 are believed to be allowable.

Applicant notes that the outstanding Office Action stated that Fig. 5 was objected because it did not include element numbers 42, 43, 35 and 61-62 and pointed to page 11 of Applicant's specification. However, Fig. 5 includes element numerals 42, 43 and 35 and page 11 discusses Fig. 8, not Fig. 5. Accordingly, it is believed that the outstanding Office Action meant to object to Fig. 8. Thus, in response to the objection to the drawings, submitted herewith is a Letter Submitting Drawing Sheets along with one Replacement Sheet

for Figs. 7-8 adding the appropriate reference numerals 42, 43, 35 and 61-62 to Fig. 8. The drawings are thus believed to be compliant with regulations.

In response to the rejection under 35 U.S.C. § 112, second paragraph, Claims 1 and 7 are amended to correct the noted informalities. In particular, the word "accessory" is replaced with the word "pump" which has proper antecedent basis. In view of amended Claims 1 and 7, it is believed that all pending claims are definite and no further rejection on that basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually acceptable language.

In order to vary the scope of protection recited in the claims, new Claims 16-24 are added. New Claims 16-24 find non-limiting support in the disclosure as originally filed, for example in the original claims and in Figs. 4B and 6. Therefore, the changes to the claims are not believed to raise a question of new matter.<sup>1</sup>

In response to the rejections of Claims 1-4 and 14-15, Applicant respectfully traverses the rejections. However, in the spirit of moving prosecution forward for the present application, independent Claim 1 is amended to incorporate the features of Claims 4-5 so that the rejections are now moot. Applicant reserves the right to present Claims 1-4 and 14-15, or similar claims, in a continuation application and to address any traversed issues in such application.

In response to the rejection of Claims 5-7 under 35 U.S.C. §103(a), Applicant respectfully requests reconsideration of this rejection and traverses the rejection, as discussed next.

Briefly recapitulating, Applicant's invention, as recited in amended Claim 1, relates to a system for driving a pump in a turboengine. The system includes an electric motor with a

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<sup>1</sup> See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

stator and a rotor. The system also includes an air turbine with a casing and a rotary assembly. The air turbine is suitable for being fed by a flow of air taken from a compressor of the turboengine in order to contribute to driving the pump. The air turbine lies on a same axis as the electric motor. The stator of the electric motor is integrated in the casing of the air turbine, and the rotor of the electric motor is integrated in the rotary assembly of the air turbine. As stated in Claim 3, the flow of air taken from the compressor is sufficient to enable the pump to be operated by the air turbine in the absence of electrical power supply or in the event of the electric motor failing.

As explained in Applicant's specification at page 2, Applicant's invention improves upon conventional systems because it can prevent an engine from going out during in-flight electrical breakdowns.

Turning now to the applied prior art, the Hambling and Williams patents disclose power units. However, as acknowledged by the outstanding Office Action,<sup>2</sup> these patents fail to teach a stator of an electric motor integrated in the casing of an air turbine, and a rotor of the electric motor integrated in the rotary assembly of the air turbine, as recited in Applicant's amended Claim 1. The outstanding Office Action rejects Applicant's Claims 5-7 based on the proposition that the Wollenweber et al. patent discloses the above features,<sup>3</sup> and that it would have been obvious to modify the Hambling or Williams systems by importing these features from the Wollenweber et al. patent to arrive at Applicant's claimed invention. Applicant respectfully disagree, as discussed next.

The Wollenweber et al. patent discloses an apparatus that combines the elements of a rotary electric machine and an air compressor, such as a turbocharger. In the Wollenweber et al. apparatus, the compressor 16, the electric motor (29,32) and the turbine 14 are combined in a single casing. The electric motor (29, 32) is axially positioned between the compressor

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<sup>2</sup> See outstanding Office Action at page 5, lines 16-18.

<sup>3</sup> See outstanding Office Action from page 5, lines 18-22.

16 and the turbine 14. The inlet of the turbine 14 and the outlet of the compressor 16 are at opposite ends of the casing. Consequently, the combination proposed by the outstanding Office Action could not operate because it is not possible in the Wollenweber et al. apparatus to find an output power shaft for driving a pump.

Further, there is insufficient evidence for a motivation to modify the Hambling or Williams systems by incorporating Wollenweber et al.'s motor/turbine configuration, for the following reasons.<sup>4</sup>

The outstanding Office Action states that the proposed modification would have been obvious "in order to employ an integrated motor/turbine/housing structure used in the art for its simplicity."<sup>5</sup> The record, however, fails to provide the required evidence of a motivation for a person of ordinary skill in the art to perform such modification. The Wollenweber et al. patent fails to suggest why a person of ordinary skill in the art would be motivated to incorporate its motor/turbine/housing structure in the Hambling or Williams systems. The Wollenweber et al. patent does not suggest that its structure would simplify systems such as those of the Hambling or Williams systems. Further, the Wollenweber et al. patent does not suggest that its structure would simplify systems in which the turbine is fed by a flow of air taken from the compressor of the turboengine in order to contribute to driving a pump, as recited in amended Claim 1.

In addition, the Hambling and Williams patents do not suggest that further improvement is desired, nor that another feature should be added to further simplify their

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<sup>4</sup> See MPEP 2143.01 stating "[o]bviousness can only be established by combining or modifying the teaching of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art," (citations omitted). See also MPEP 2144.08 III stating that "[e]xplicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. . . Conclusory statements of similarity or motivation, without any articulated rational or evidentiary support, do not constitute sufficient factual findings."

<sup>5</sup> See outstanding Office Action at page 6, lines 3-6.

structures. In particular, the Hambling and Williams patents do not suggest to incorporate a motor/turbine configuration, such as the one disclosed in the Wollenweber et al. patent.

The prior art, therefore, does not provide the motivation to perform the proposed modification of the Hambling or Williams systems. In other words, an attempt to bring in the isolated teaching of Wollenweber et al.'s structure into the Hambling or Williams systems would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole.<sup>6</sup> While the required evidence of motivation to combine need not come from the applied references themselves, the evidence must come from *somewhere* within the record.<sup>7</sup> In this case, the record fails to support the proposed modification of the Hambling and Williams systems.

Furthermore, it is not clear from the record how Wollenweber et al.'s structure could be incorporated into the Hambling or Williams systems. Such modification would require a substantial reconstruction or redesign of the elements of the Hambling and Williams systems, and/or would change the basic principle of operation of the Hambling and Williams systems. There is no evidence that a person of ordinary skill in the art would be motivated to perform such changes and redesign.<sup>8</sup> Furthermore, it is not clear from the record whether such modification would actually simplify the Hambling and Williams systems.

New Claims Claim 21-24 recite features that are not taught or suggested by the prior art. In particular, new independent Claim 21 recites a system including a turboengine with a

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<sup>6</sup> See In re Ehrreich 590 F.2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed "in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art," and that one "must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.")

<sup>7</sup> In re Lee, 277 F.3d 1338, 1343-4, 61 USPQ2d 1430 (Fed. Cir. 2002) ("The factual inquiry whether to combine references ... must be based on objective evidence of record. ... [The] factual question of motivation ... cannot be resolved on subjective belief and unknown authority. ... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion").

<sup>8</sup> See In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 (reversing an obviousness rejection where the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.")

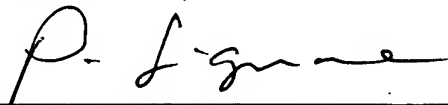
compressor and a pump, wherein an electric motor is configured to drive the pump, and an air turbine is configured to receive a flow of air from the compressor of the turboengine and further configured to contribute to driving the pump, the stator of the electric motor being located in the casing of the air turbine. New Claim 22 specifies that the rotor of the electric motor is located in the rotary assembly of the air turbine, and Claim 23 states that the air turbine lies on a same axis as the electric motor. The prior art, including the Hambling, Williams and Wollenweber et al. patents, does not teach these combinations of features. Thus, Claims 21-24 are also believed to be allowable.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-3 and 6-27 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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